

KELLERMAN, THEUNIS STEPHANUS (FANIE) (September 27, Broken Hill, Zambia – April 1, 2012, Pretoria, South Africa), Veterinary toxicologist. Married Meidi Beyers, one son and one daughter. EDUCATION : University of Natal, 1957: BSc Agric (Plant Pathology); University of Pretoria, 1967: BVSc. CAREER : 1958, land development officer, Zimbabwe; 1959-1963, officer in charge Mzengezi Experiment Station, Zimbabwe; 1964-1967, study leave to University of Pretoria; 1968-1969, government veterinary officer, Bulawayo, Zimbabwe; 1970-1998, researcher and assistant director, Division of Toxicology, Onderstepoort Veterinary Institute, Pretoria, South Africa. CONTRIBUTIONS : Kellerman was instrumental in the first diagnoses of many plant-induced toxicoses such as facial eczema, leucoencephalomalacia in horses and tremors in cattle caused by ryegrass or *Aspergillus clavatus*. His most important contribution was arguably solving the mystery of 'geeldikkop' or photosensitization of sheep caused by "dubbeltjies" (*Tribulus terrestris*). With various co-workers it was proved that the condition is caused by the occlusion of bile ducts by crystalloid material consisting of steroidal saponins derived from the plant. He also identified a mycotoxin (sporidesmin) as a possible predisposing factor. Diplodiosis, a uniquely African neuromycotoxicoses caused by *Diplodia maydis* was also studied and shown to cause stillbirths and perinatal losses in calves and lambs. A very innovative study concerned an attempt to control plant poisonings by exploiting the natural ability of stock to avoid certain plants termed conditioned feed aversion (CFA). Using tulip as a model he proved that the toxin itself is the factor causing the aversion.

HOMAGES AND DISTINCTIONS : Fanie Kellerman received wide recognition for his work, including the Gold Medal of the SA Veterinary Association in 1992, the National Agricultural Scientist of the year in 1996, The President's Award of the Agricultural Research Council in 1997 and appointments as Senior Specialist Scientist by the ARC and Extraordinary Professor (University of Pretoria) in 1998. In 2008 he was awarded an Honorary Doctorate by UP.

WRITINGS: In the mid 1980s Kellerman realized that the era of descriptive toxicology, that lasted almost a hundred years, was slowly coming to an end. Consequently he and co-authors wrote a reference work reviewing and collating all the existing data on plant poisonings and mycotoxicoses of livestock in southern Africa. The book has become the standard reference work on plant toxicology, not only in South Africa but applicable to large parts of Africa, particularly East Africa, where the vegetation is very similar to that of southern Africa. The book has in fact led to collaboration with colleagues as far afield as Tanzania, Kenya and Zambia. A completely revised second edition of the textbook was published in 2005. He was also senior author or co-author of more than 70 scientific publications, including three chapters in books. A few representative references are the following: KELLERMAN, T.S., COETZER, J.A.W., NAUDÉ, T.W. & BOTHA, C.J. 2005. 2<sup>nd</sup> ed., *Plant Poisonings and Mycotoxicoses of Livestock in Southern Africa*. Cape Town: Oxford

University Press. KELLERMAN, T.S., NEWSHOLME, S.J., COETZER, J.A.W. & VAN DER WESTHUIZEN, G.C.A., 1984. A tremorgenic mycotoxicosis of cattle caused by maize sprouts infested with *Aspergillus clavatus*. *Onderstepoort Journal of Veterinary Research*, 51, 271-274. KELLERMAN, T.S., RABIE, C.J., VAN DER WESTHUIZEN, G.C.A., KRIEK, N.P.J. & PROZESKY, L., 1985. Induction of diplodiosis, a neuromycotoxicosis in domestic ruminants with cultures of indigenous and exotic isolates of *Diplodia maydis*. *Onderstepoort Journal of Veterinary Research*, 52, 35-42. KELLERMAN, T.S., MARASAS, W.F.O., THIEL, P.G., GELDERBLUM, W.C.A., CAWOOD, M. & COETZER, J.A.W., 1990. Leukoencephalomalacia in two horses induced by oral dosing of fumonisin B<sub>1</sub>. *Onderstepoort Journal of Veterinary Research*, 57, 269-275. KELLERMAN, T.S., ERASMUS, G.L., COETZER, J.A.W., BROWN, J.M.M. & MAARTENS, B.P., 1991. Photosensitivity in South Africa. VI. Experimental induction of geeldikkop in sheep with crude steroidal saponins from *Tribulus terrestris*. *Onderstepoort Journal of Veterinary Research*, 58, 47-53. KELLERMAN, T.S., NAUDÉ, T.W. & FOURIE, N. 1996. The distribution, diagnosis and estimated economic impact of plant poisonings and mycotoxicoses in South Africa. *Onderstepoort Journal of Veterinary Research*, 63: 65-90

REFERENCES/OBITUARY: JAW COETZER, In Memoriam: Dr TS (Fanie) Kellerman. Vetnews (Newsletter of the South African Veterinary Association) May 2013, p12.